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Attorney Docket No.: SHI 19.251 (310010-00106)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Inventor : **Ralph C. LONGSWORTH**  
Serial No. : **concurrently herewith**  
Filed : **concurrently herewith**  
Title : **PULSE TUBE COOLING BY CIRCULATION OF  
BUFFER GAS**

July 2, 2004

Commissioner For Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

S I R:

In order to comply with discretionary rules 37 CFR §§1.97 and 1.98, attached hereto is Form PTO-1449. The documents listed thereon contain information, which the Examiner may consider to be important in deciding whether to issue a patent in the instant application.

As this Statement is being filed prior to issuance of a first Office Action, no fee is due.

The present Disclosure Statement is being submitted in compliance with 37 CFR §1.56 as an Examiner might consider any cited document important in deciding whether to allow the application to issue as a patent, but the citation of each document is not to be construed as an admission that such document is necessarily relevant or prior art. No representation is intended that the cited documents represent the results of a complete search, and it is anticipated that the Examiner in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 CFR §1.104 (a),

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and in the course of such search will review for relevance every document cited on the attached form even if not initialed.

Early and favorable consideration is respectfully solicited.

Any fee due with this paper, not fully covered by an enclosed check, may be charged on Deposit Account 50-1290.

Respectfully submitted,

Samson Hengott  
Reg. No. 23,072

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|          |                                                            |                                                        |
|----------|------------------------------------------------------------|--------------------------------------------------------|
| 1449/PTO | U.S. Department of Commerce<br>Patent and Trademark Office | Application No. : <b>concurrently herewith</b>         |
|          |                                                            | Filing Date : <b>concurrently herewith</b>             |
|          |                                                            | First Named Inventor: <b>Ralph C. LONGSWORTH</b>       |
|          |                                                            | Group Art Unit :                                       |
|          |                                                            | Examiner Name :                                        |
|          |                                                            | Attorney Docket No. : <b>SHI 19.251 (310010-00106)</b> |

# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

Sheet 1 of 1

## **U.S. PATENT DOCUMENTS**

| Examiner Initials | Cite No. <sup>1</sup> | U.S. Patent Document | Kind Code if known <sup>2</sup> | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns Lines Where Relevant Passages or Relevant Figures Appear |
|-------------------|-----------------------|----------------------|---------------------------------|-------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------|
|                   |                       | 5,966,942            |                                 | MITCHELL                                        | 10-19-1999                                       |                                                                         |
|                   |                       | 6,256,998            |                                 | GAO                                             | 07-10-2001                                       |                                                                         |
|                   |                       | 6,094,921            |                                 | ZHU et al                                       | 08-01-2000                                       |                                                                         |
|                   |                       | 6,351,954            |                                 | NOGAWA et al                                    | 03-05-2002                                       |                                                                         |
|                   |                       | 5,720,172            |                                 | ISHIZAKI                                        | 02-24-1998                                       |                                                                         |
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|                   |                       |                      |                                 |                                                 |                                                  |                                                                         |
|                   |                       |                      |                                 |                                                 |                                                  |                                                                         |
|                   |                       |                      |                                 |                                                 |                                                  |                                                                         |

## **FOREIGN PATENT DOCUMENTS**

| Examiner Initials | Cite No. <sup>1</sup> | Foreign Patent Document Office <sup>3</sup> Number <sup>4</sup> | Kind Code <sup>5</sup> (if known) | Country | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns Lines Where Relevant Passages or Relevant Figures Appear |
|-------------------|-----------------------|-----------------------------------------------------------------|-----------------------------------|---------|-------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------------|
|                   |                       | 04-225755                                                       |                                   | JP      | SANYO ELECTRIC CO, LTD                          | 08-14-1992                                       |                                                                         |
|                   |                       |                                                                 |                                   |         |                                                 |                                                  |                                                                         |
|                   |                       |                                                                 |                                   |         |                                                 |                                                  |                                                                         |
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|                   |                       |                                                                 |                                   |         |                                                 |                                                  |                                                                         |

## **OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

| Examiner Initials | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), data, page(s), volume-issue number(s), publisher, country, where published, source. | Applicant check here if English language translation attached <sup>T</sup> |
|-------------------|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
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Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw a line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that Issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.1<sup>6</sup> if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

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